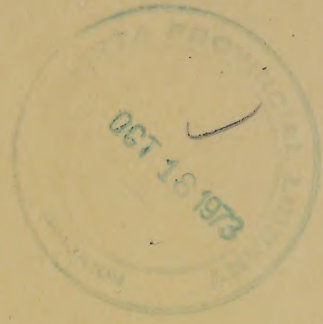


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GENERAL PLANNING REPORT
OF THE NORTHEASTERN ALBERTA
MANPOWER DEVELOPMENT COMMITTEE

TO THE

FEDERAL / PROVINCIAL
MANPOWER NEEDS COMMITTEE

August 24, 1973

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NORTHEASTERN ALBERTA

MANPOWER DEVELOPMENT COMMITTEE

Chairman (April 6 - July 26/73)

Jerzy Nigan, Office of Program Coordination

Vice Chairman (Acting Chairman from July 26 - August 24/73)

Al Anderson, Alberta Manpower and Labour

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NORTHEASTERN ALBERTA

MANPOWER DEVELOPMENT COMMITTEE

Chairman (April 6 - July 26/73)

Jerry Bigam, Office of Program Coordination

Vice Chairman (Acting Chairman from July 26 - August 24/73)

Al Anderson, Alberta Manpower and Labour

Members ----- Jane McAskill, Canada Manpower and Immigration

Jack Mitchell, Alberta Advanced Education

Ken Svenson, Alberta Manpower and Labour

Muriel Venne, Metis Association of Alberta

Resource Persons - Harold Cardinal, Indian Association of Alberta

Joe Couture, Alberta Indian Education Centre

Stan Daniels, Metis Association of Alberta

Graham Dixon, Canada Manpower and Immigration

Ernie Dosdall, Indian Affairs and Northern Dev.

John Elsinga, Alberta Manpower and Labour

Ray Fast, Alberta Advanced Education

Ike Glick, Alberta Indian and Metis Liaison

John Hutton, Alberta Manpower and Labour

Jim Lockhart, Canada Manpower and Immigration

Earl Mansfield, Alberta Manpower and Labour

John Rayson, Indian Affairs & Northern Dev.

Doug Schmit, Alberta Advanced Education

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1. INTRODUCTION

The Northeastern Alberta Manpower Development Committee was organized in April 1973 with the broad objective of developing a comprehensive manpower plan directed towards establishment of policies and programs based on the proposed Syncrude and associated developments from the construction to the operational stages.

This plan will:

- (a) ensure that local residents have the opportunity to take advantage of the expanding job potential; and
- (b) ensure that an overall employment strategy will be proposed to provide adequate staffing of new job opportunities.

The Manpower Development Committee includes representatives from the Alberta Departments of Manpower and Labour and Advanced Education, the Canada Department of Manpower and Immigration, and the Metis Association of Alberta. The Committee was chaired by a representative from the Office of Program Coordination. Although consultations were held with the Indian Association of Alberta, they did not appoint a representative to the Committee.

During the course of its work, the Manpower Development Committee has been able to obtain definitive information with respect to the demand for manpower which will result from the Syncrude development, particularly the manpower requirements during the construction and operating phases of the plant itself. It was not possible, except in an approximate way, to determine the potential supply of manpower. For instance, the supply of skilled construction tradesmen will depend upon the levels of other construction

activity, not only in Alberta but throughout Canada. Consideration has been given to the probable level of general construction activity during the Syncrude construction phase, and special attention was devoted to major industrial projects in Alberta and elsewhere in the country which are to be undertaken at the same time. However, there will no doubt be additional competition for manpower, especially during the latter stages of the Syncrude development, from projects which are under consideration but unannounced at this time.

For the ancillary employment that will be created in the Town of Fort McMurray, the availability of supply will depend to a considerable extent on the degree to which the spouses of G.C.O.S. and Syncrude employees are prepared to take clerical, sales, teaching, nursing and other employment.

Although it was not possible to estimate the specific numbers of workers who will have to be trained to meet the employment demands, certain skills that will be in very short supply and numerous others that will offer substantial opportunities for local residents have been identified.

Details are provided with respect to the training requirements for the various employment opportunities that will be created, and the report includes an assessment of the training capabilities of existing institutions in the northern part of the Province, with particular emphasis on the northeastern area.

Information was obtained on the current local situation in northeastern Alberta, with respect to the composition and

characteristics of the labour force and to the problems and needs of native communities in the area.

Recommendations have been made regarding training and related programs which will be required, the organization that should be established to coordinate and integrate the manpower programs with one another and with the overall development in northeastern Alberta, and other matters or concerns affecting the project which involve the federal and provincial governments.

2. MANPOWER DEMAND

(a) CONSTRUCTION PHASE

During the period from late 1973 to mid-1977 manpower will be required to construct the plant, to operate the construction camp at the site, to perform administrative and clerical functions related to the project, to build a pipeline from the Syncrude plant to Edmonton, and to carry out the construction that will be required in the Town of Fort McMurray. Each of these segments of the total manpower demand during the construction phase is examined separately in the following pages.

i) Plant Construction - Manual Workforce

The anticipated manpower requirements for each trade are set out by month in Table I. These forecasts assume that the plant can and will be completed in September of 1977, providing that the project is undertaken during the fall of this year. Although there is the possibility that the construction period might have to be extended due to labour shortages or other problems, it was considered appropriate to plan on the basis that the optimum schedule will be achieved.

The numbers of construction workers required have been calculated on the assumption that all trades will work eight hours of overtime per week. Throughout these forecasts, the indicated requirements exceed by 10% the actual construction manpower required on the job. Canadian Bechtel's experience during past Alberta projects has shown that, due to absenteeism and turnover, there must

be an additional 10% of personnel on the payroll in order to maintain the required manpower at work.

The LABOURERS & OTHERS category includes sheet metal workers and painters, neither of which will be utilized to any significant extent.

TABLE I

ANTICIPATED MANPOWER REQUIREMENTS - CONSTRUCTION OF

SYNCRUDE AND POWER PLANT - Calendar Year 1973

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
BOILERMAKERS (STEEL FABRICATORS)												
BOILERMAKERS (PRESSURE WELDERS)												
CARPENTERS									4	4	4	11
CEMENT MASONS												
ELECTRICIANS												1
IRONWORKERS (STRUCTURAL)												-
IRONWORKERS (RODMEN)												(13)
MILLWRIGHTS												13
OPERATING ENGINEERS									29	33	39	56
PIPEFITTERS (FITTERS)												
PIPEFITTERS (WELDERS)												
TEANSIERS												13
INSULATORS												
LABOURERS & OTHERS									12	14	32	70
TOTALS									41	47	75	164
CRAP GATEWAY & MAINTENANCE STAFF									12	13	15	21
TOTAL MANUAL FORCE									53	60	90	185

TABLE I

ANTICIPATED MANPOWER REQUIREMENTS - CONSTRUCTION OF

SYNCRUDE AND POWER PLANT - Calendar Year 1974

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
BOILERMAKERS (STEEL FABRICATORS)						(24)	(27)	(31)	(34)	(36)	(48)	(57)
BOILERMAKERS (PRESSURE WELDERS)						8	9	10	11	12	16	19
CARPENTERS	25	30	40	42	45	84	133	173	176	178	169	142
CEMENT MASONS				1	4	11	13	13	17	20	23	23
ELECTRICIANS	3	3	4	10	16	19	21	26	36	51	50	59
IRONWORKERS (STRUCTURAL)	-	-	-	11	16	17	22	41	61	75	93	112
IRONWORKERS (RODMEN)	(13)	(16)	(21)	(54)	(78)	(80)	(85)	(94)	(121)	(140)	(151)	(182)
MILLRIGHTS	13	16	21	43	62	63	63	53	60	65	58	70
OPERATING ENGINEERS	56	68	72	78	89	94	98	101	101	111	140	186
PIPEFITTERS (FITTERS)		3	3	16	26	69	94	97	130	134	145	154
PIPEFITTERS (WELDERS)		(3)	(4)	(21)	(34)	(92)	(123)	(130)	(174)	(179)	(195)	(206)
TEAMSTERS	14	21	21	24	26	30	40	80	84	96	102	102
INSULATORS												
LABOURERS & OTHERS	75	80	80	98	130	134	140	150	192	237	257	257
TOTALS	186	221	242	328	422	568	682	799	936	1054	1145	1225
CONSTRUCTION & MAINTENANCE STAFF	24	29	31	37	48	62	72	81	94	103	111	118
TOTAL MANUAL FORCE	210	250	273	365	470	630	754	880	1030	1157	1256	1343

TABLE I

ANTICIPATED MANPOWER REQUIREMENTS - CONSTRUCTION OF

SYNCRUDE AND POWER PLANT - Calendar Year 1975

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
BOILERMAKERS (STEEL FABRICATORS)	74 (110)	78 (117)	82 (122)	119 (178)	135 (202)	188 (282)	232 (348)	232 (348)	232 (348)	232 (348)	232 (348)	232 (348)
BOILERMAKERS (PRESSURE WELDERS)	36	39	40	59	67	94	116	116	116	116	116	116
CARPENTERS	119	119	142	146	187	209	207	213	250	272	248	229
CEMENT MASONS	20	29	29	28	32	33	39	39	39	39	33	33
ELECTRICIANS	72	78	85	105	166	190	209	232	280	343	389	390
IRONWORKERS (STRUCTURAL)	115 (185)	115 (185)	115 (185)	131 (201)	146 (216)	146 (216)	148 (218)	174 (242)	190 (255)	195 (255)	200 (255)	185 (229)
IRONWORKERS (RODMEN)	70	70	70	70	70	70	70	68	65	60	55	44
MILLWRIGHTS	15	23	30	36	50	52	58	63	67	73	77	77
OPERATING ENGINEERS	205	206	211	257	265	266	266	267	267	267	267	267
PIPEFITTERS (FITTERS)	148 (222)	172 (230)	205 (274)	268 (358)	283 (377)	334 (445)	381 (508)	381 (509)	381 (509)	385 (514)	450 (600)	570 (762)
PIPEFITTERS (WELDERS)	74	58	69	90	94	111	127	128	128	129	150	192
TEAMSTERS	102	103	103	103	108	109	110	121	122	122	140	174
INSULATORS									28	56	84	90
LABOURERS & OTHERS	257	257	257	270	272	276	287	375	387	385	342	306
TOTALS	1307	1347	1438	1682	1875	2078	2250	2409	2552	2674	2783	2905
CAMP CATERING & MAINTENANCE STAFF	125	128	137	156	171	187	200	212	224	233	242	250
TOTAL MANUAL FORCE	1432	1475	1575	1838	2046	2265	2450	2621	2776	2907	3025	3155

TABLE I

ANTICIPATED MANPOWER REQUIREMENTS - CONSTRUCTION OF

SYNCRUDE AND POWER PLANT - Calendar Year 1976

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
BOILERMAKERS (STEEL FABRICATORS)	232 (348)	232 (348)	232 (348)	232 (348)	230 (345)	230 (345)	230 (345)	229 (343)	226 (339)	222 (333)	220 (330)	189 (284)
BOILERMAKERS (PRESSURE WELDERS)	116	116	116	116	115	115	115	114	113	111	110	95
CARPENTERS	191	182	178	188	188	188	186	185	185	158	154	127
CEMENT MASONS	33	33	33	26	24	18	16	14	11	4	3	2
ELECTRICIANS	415	432	477	482	543	543	530	524	515	405	383	290
IRONWORKERS (STRUCTURAL)	170 (202)	172 (202)	191 (213)	197 (213)	200 (213)	205 (213)	192 (196)	195 (197)	194 (194)	187 (187)	114 (114)	90 (90)
IRONWORKERS (RODMEN)	32	30	22	16	13	8	4	2	-	-	-	-
MILLWRIGHTS	79	83	83	95	112	112	95	92	90	67	63	55
OPERATING ENGINEERS	320	320	333	338	350	350	333	330	330	300	228	200
PIPEFITTERS (FITTERS)	635 (850)	635 (850)	675 (900)	715 (954)	715 (955)	750 (1000)	725 (967)	712 (950)	660 (880)	570 (762)	530 (707)	485 (647)
PIPEFITTERS (WELDERS)	215	215	225	239	240	250	242	238	220	192	177	162
TEAMSTERS	200	200	220	233	233	233	233	233	233	233	225	185
INSULATORS	112	140	168	175	230	255	255	255	255	255	242	200
LABOURERS & OTHERS	306	283	255	253	250	243	239	230	233	218	180	160
TOTALS	3056	3073	3208	3305	3443	3500	3395	3353	3265	2922	2629	2240
CRAFT CONTRACTING & MAINTENANCE STAFF	262	262	272	280	292	300	288	285	278	253	231	200
TOTAL MANUAL FORCE	3318	3335	3480	3585	3735	3800	3683	3638	3543	3175	2860	2440

TABLE I

ANTICIPATED MANPOWER REQUIREMENTS - CONSTRUCTION OF

SYNCRUDE AND POWER PLANT - Calendar Year 1977

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
BOILERMAKERS (STEEL FABRICATORS)	171 (257)	137 (206)	102 (102)	34 (34)	11 (11)	4 (2)	1 (2)	1 (1)	1 (1)			
BOILERMAKERS (PRESSURE WELDERS)	86	69	34									
CARPENTERS	36	26	13	9	4	4	2	1	1			
CEMENT MASONS	1	1	1	1	1	1	1	1	1			
ELECTRICIANS	249	187	89	58	43	35	32	26	15			
IRONWORKERS (STRUCTURAL)	79	2	2	2	2	2	1	1	1			
IRONWORKERS (RODMEN)	(79)	(2)	(2)	(2)	(2)	(2)	(1)	(1)	(1)			
MILLWRIGHTS	32	21	19	10	8	2	2	2	1			
OPERATING ENGINEERS	165	123	65	39	37	19	3	2	1			
PIPEFITTERS (FITTERS)	422 (563)	380 (507)	290 (386)	220 (294)	90 (120)	86 (115)	30 (40)	19 (26)	3 (4)			
PIPEFITTERS (WELDERS)	141	127	96	74	30	29	10	7	1			
TEAMSTERS	185	180	138	71	45	9	8	3	1			
INSULATORS	153	90	85	72	56	45	25	20	10			
LABOURERS & OTHERS	145	100	90	50	40	29	20	15	3			
TOTALS	1865	1443	990	640	367	261	136	98	39			
CAMP CATERING & MAINTENANCE STAFF	170	137	100	70	43	34	20	17	12			
TOTAL MANUAL FORCE	2035	1580	1090	710	410	295	156	115	51			

For each month during the plant construction period, an estimate was provided with respect to the total camp catering and maintenance personnel requirement. These requirements vary with the size of the construction workforce, but they do not vary directly because economies of scale are achieved in the operation of a camp as the workforce increases in size. Based upon recent manpower statistics for large construction camps in northern Alberta, estimates were made of the occupational breakdown for various workforce levels. Table II below shows the camp personnel requirements for the Syncrude project at workforce levels of 500, 1000, 2000, 3000, and 3500.

TABLE II

CAMP CATERING AND MAINTENANCE PERSONNEL REQUIREMENTS

CLASSIFICATION	NUMBER OF CAMP RESIDENTS				
	500	1000	2000	3000	3500
Manager & Assistants	1	1	2	3	3
Clerical Staff	1	2	2	3	3
Checkers	1	2	4	6	6
Chefs	1	2	2	2	2
Waiters	11	18	36	53	60
1st, 2nd, 3rd Cooks	8	14	25	35	40
Sandwich & Salad Men	3	5	9	12	13
Dish & Pot Washers	4	7	13	18	20
Other Clean-up Help	6	10	17	23	25
Bakers & Helpers	3	5	10	14	16
Butchers & Helpers	1	2	4	6	7
Commissary Men	3	4	7	10	11
Bull Cooks (Janitors)	15	30	60	90	105
Maintenance Men	2	3	4	5	5
TOTAL	60	105	195	280	315

ii) Plant Construction - Administrative and
Clerical Personnel

Canadian Bechtel's administrative and clerical staff will be divided between the Mildred Lake job site and Edmonton, with the vast majority at the latter location. It was decided to limit the number of job site personnel as much as possible due to the high cost of accommodating them in the camp and the anticipated difficulties in securing females to work there. Bechtel experienced a great deal of trouble in maintaining the clerical staff at the Procter and Gamble project near Grande Prairie, and it is understood that Great Canadian Oil Sands Ltd. is continually short of female help.

The number of administrative and clerical personnel at the job site will reach a peak of 37 early in 1976. Of that number six will occupy the following senior positions: supervisor of project services, senior accountant and four accountants. It is expected that all of these positions will be filled by personnel who are presently employed by Canadian Bechtel.

The remainder of the administrative and clerical staff, to be recruited locally, is set out in the following table by occupational categories and by quarter years.

TABLE III
CLERICAL PERSONNEL REQUIREMENTS - MILDRED LAKE

OCCUPATIONAL CATEGORY	1973			1974			1975			1976				1977					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
Clerk typists, secretaries, PABX & Telex operators (1)				2	3	4	7	8	9	11	12	12	11	9	8	7	6	5	2
Key punch operators (2)							1	1	1	2	3	3	3	3	3	2	1	1	
Mail & messenger clerks (3)					1	1	2	2	2	2	2	2	2	2	2	2	2	1	1
Time keepers & payroll clerks (3)				2	2	3	5	7	7	9	11	12	14	14	12	9	5	3	2
TOTAL OF ABOVE CLERICAL STAFF				4	6	8	15	18	19	24	28	29	31	30	26	22	16	11	9
TOTAL ADMINISTRATIVE AND CLERICAL STAFF AT JOB SITE				6	9	11	20	23	24	30	34	35	37	37	31	27	21	15	13
																			8

Notes: 1. Majority will be clerk typists and secretaries. Almost all positions will be held by females.

2. Usually females

3. Usually males

iii) Pipeline Construction

Syncrude is uncertain as to whether the synthetic crude pipeline will be build by them to serve their plant only or by a common carrier to serve Syncrude and one or more future oil sands plants. The Senior Engineer in the Energy Resources Conservation Board's Pipeline Division suggested that it should be assumed that a 24 inch line, with sufficient capacity to handle approximately 200,000 barrels per day, would be constructed initially and that more pumping stations and loops would be added as required in the future.

Banister Pipelines Ltd., which build a portion of the G.C.O.S. line, advised that a 24 inch line would likely be constructed by two contractors, each responsible for a "spread", and that it could be completed within one year. Thus, it is assumed that the pipeline will be constructed during the period from mid-1976 to mid-1977.

It was learned that the pipeline construction industry has a labour force that specializes in that kind of work and is almost completely separate from the general construction labour force. The industry in Canada constructs several thousands of miles of pipelines per year. The size and length of the Mildred Lake - Edmonton line are such that it could be easily handled as part of the industry's normal construction program. No possibility of manpower problems is foreseen unless a Canadian Arctic pipeline is undertaken. If that should occur along with normal demands for pipeline construction in Canada, it is estimated that

the industry's regular labour force would be able to handle only about 50% of the work.

Assuming that the Mildred Lake - Edmonton pipeline is constructed in two spreads, a rough estimate of the peak manpower requirement would be 250 per contractor, for a total of 500 workers. An approximate occupational breakdown of that peak requirement would be as follows:

Supervision and administration	40
Equipment operators	95
Equipment mechanics	15
Equipment service and apprentices	30
Truck and bus drivers	40
Welders and fitters	65
Welders' helpers and apprentices	70
Skilled labourers	20
Unskilled labourers	<u>125</u>
	500

In conclusion, it appears that the construction of the synthetic crude pipeline will not create any new employment opportunities unless the project is undertaken during a period of extraordinarily high demand for pipeline construction in Canada.

iv) Fort McMurray Development

A detailed forecast was prepared with respect to the probable expansion within the Town of Fort McMurray during the construction period for the Syncrude plant. This forecast was based on the assumption that the Town's population will more than double during the next four years, and it attempted to take account of every kind of construction activity that will be required including housing of all forms, retail space, office space, warehousing, accommodation and entertainment facilities, educational institutions, hospital facilities, recreational facilities and municipal projects of various kinds.

The estimates of construction manpower requirements shown in the following table were derived from the forecast of development in Fort McMurray. The forecast assumed that the highest level of construction activity in the town would occur in 1974 because a deficit situation now exists with respect to housing, retail and commercial space, hotel rooms, educational facilities and serviced land. In addition, the population of Fort McMurray is expected to increase very rapidly during 1974 to a total of approximately 11,500 persons by the end of the year.

TABLE IV

ANTICIPATED MANPOWER REQUIREMENTS - CONSTRUCTION IN THE TOWN OF FORT MCMURRAY

1974

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
CARPENTERS	81	93	89	108	102	117	118	118	111	101	44	74
CEMENT MASONS	12	14	15	19	18	21	21	21	20	18	17	14
ELECTRICIANS	30	33	33	39	38	44	44	44	42	39	36	30
IRONWORKERS	9	12	10	10	9	10	10	10	9	9	8	6
OPERATING ENGINEERS	23	25	17	29	88	83	76	74	76	76	11	9
PLUMBERS	30	35	34	41	39	44	44	44	41	39	36	28
TEAMSTERS	1	2	2	2	20	21	20	20	20	20	2	2
INSULATORS	1	2	2	2	2	2	2	2	2	2	2	2
LABOURERS & UNSKILLED HELPERS	111	131	121	141	154	174	174	173	164	155	119	96
TOTALS	298	347	323	391	470	516	509	506	485	459	275	261

TABLE IV

ANTICIPATED MANPOWER REQUIREMENTS - CONSTRUCTION IN THE TOWN OF FORT MCMURRAY

1975	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
CARPENTERS	44	51	53	62	61	67	65	64	60	56	50	40
CEMENT MASONS	8	8	9	10	10	11	11	10	10	9	8	7
ELECTRICIANS	19	20	21	23	22	25	24	24	23	21	19	16
IRONWORKERS	5	6	6	7	6	7	6	6	6	6	5	4
OPERATING ENGINEERS	5	6	6	19	95	93	83	79	80	76	6	4
PLUMBERS	21	24	25	27	26	27	27	26	25	24	21	18
TEAMSTERS	2	2	3	3	20	16	24	24	23	21	2	2
INSULATORS	1	1	1	1	1	1	1	1	1	1	1	1
LABOURERS & UNSKILLED HELPERS	62	71	74	83	113	121	117	114	108	101	66	53
TOTALS	167	189	198	235	354	368	358	348	336	315	178	145

TABLE IV

ANTICIPATED MANPOWER REQUIREMENTS - CONSTRUCTION IN THE TOWN OF FORT MCMURRAY

1976	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
CARPENTERS	44	50	53	64	63	74	74	74	71	65	60	49
CEMENT MASONS	8	9	9	11	11	13	12	12	12	11	10	9
ELECTRICIANS	19	21	22	25	25	29	28	28	28	26	25	21
IRONWORKERS	4	5	5	6	6	6	6	6	6	6	5	4
OPERATING ENGINEERS	5	6	7	8	78	83	80	78	75	72	10	6
PLUMBERS	17	20	21	25	25	28	28	28	27	26	24	23
TEAMSTERS	1	1	1	1	22	24	23	22	21	20	1	1
INSULATORS	1	1	1	1	1	1	1	1	1	1	1	1
LABOURERS & UNSKILLED HELPERS	56	66	70	82	112	126	124	123	118	113	78	64
TOTALS	155	179	189	223	343	384	376	372	359	340	214	178

TABLE IV

ANTICIPATED MANPOWER REQUIREMENTS - CONSTRUCTION IN THE TOWN OF FORT MCMURRAY

1977	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
CARPENTERS	40	45	47	53	52	57	56	55	51	46	42	34
CEMENT MASONS	7	8	8	9	9	10	11	9	9	8	7	6
ELECTRICIANS	17	19	19	22	21	23	23	22	21	20	18	15
IRONWORKERS	4	5	5	6	6	6	5	5	5	5	4	3
OPERATING ENGINEERS	5	6	6	7	65	65	65	65	64	64	5	4
PLUMBERS	18	20	21	23	23	24	23	23	21	20	15	14
TEAMSTERS	1	1	1	1	18	18	18	18	18	18	1	1
INSULATORS	1	1	1	1	1	1	1	1	1	1	1	1
LABOURERS & UNSKILLED HELPERS	57	65	67	75	98	103	101	99	100	89	82	72
TOTALS	150	170	175	197	293	307	303	297	290	271	175	150

(b) SYNCRUDE OPERATING PHASE

It is presently projected that the Syncrude plant will employ approximately 1600 persons when it is fully operational in 1978. This labour force will be hired in stages during the plant construction phase, reaching the following levels in each

of the next five years:	1974	-	102
	1975	-	220
	1976	-	710
	1977	-	1475
	1978	-	1600

The detailed occupational breakdown provided in Table V does not include certain categories of contract manpower which will be required by Syncrude. It is estimated that 14 security officers and about 50 cafeteria workers will be needed. Although it is expected that most of the bus drivers will be persons with full-time jobs on the operations staff, it may be necessary to contract or hire some additional drivers.

The personnel required during the annual 4 - 6 week maintenance shut-down are not included in these projections. Contract labour will be brought in and housed in a camp at the site. It is anticipated that this period will be scheduled to either precede or follow the G.C.O.S. turn-around each year.

TABLE V

SYNCRUDE OPERATING MANPOWER REQUIREMENTS

OCCUPATION	YEAR REQUIRED					TOTAL
	1974	1975	1976	1977	1978	
<u>OFFICE PERSONNEL:</u>						
Managers - Administration	2					2
Acctg./Analytical	4	4	4	3	3	18
Systems Analysts			1	1	2	4
Personnel Specialists	3	2	5			10
Nurses			4			4
Secretaries	3		2			5
Steno/Typists	4	8	9	12		33
General Clerical			2	12		14
<u>PLANT ADMIN. PERSONNEL:</u>						
Managers - Operations	8			1		9
Superintendents	2	4	4	1		11
General Foremen		2	7			9
Foremen - Plant	1	4	8			13
Foremen - Trades & Maint.	1	3	5	2		11
Foremen - Mobile Equipment		1	6	9	1	17
Foremen - Mine	1	1	1	3	1	7
Shift Bosses - Mine			6	9	4	19
<u>OPERATIONS PERSONNEL:</u>						
Operators - Plant			51	109		160
Operators - Draglines		2	7	6		15
Operators - Graders		1	2	4	2	9
Operators - Dozers			4	16	11	31

YEAR REQUIRED

OCCUPATION	1974	1975	1976	1977	1978	TOTAL
<u>OPERATIONS PERSONNEL: cont...</u>						
Operators - F. E. Loaders				13	4	17
Operators - Pipelayers				6	2	8
Operators - Reclaimer/Conveyors			3	31	5	39
Operators - Forklifts				3		3
Operators - Pumps			12	4		16
Operators - Other Equipment	2	7		48	4	61
Truck Drivers				9		9
Oilers-Bucket Whl./Draglines		1	10	19	1	31
Drillers	2	4				6
Surveyors/Rodmen	1		4			5
Samplers 2			1	4		5
Inspectors (Equipment) 3	6					6
Lab.-Supv. & Prof. 4	1	1	5			7
Lab Technicians	1		16			17
Other Technicians	4	2	1	2		9
Engineers (Prof.)	3	18	12	1		34
Other Prof. & Spec.	1	1	5	4		11
<u>TRADES & MAINTENANCE PERSONNEL:</u>						
Mechanics	5	6	12	19	1	43
Welders		1		1		2
Pipefitters		1	2	1		4
Millwrights	1	1	5	1		8
Unspecified, (4 trades above)	2	3	38	46	19	108

OCCUPATION	YEAR REQUIRED					TOTAL
	1974	1975	1976	1977	1978	
TRADES & MAINTENANCE PERSONNEL: cont....						
Boilermakers				1		1
Carpenters	1	2	8	4		15
Instrument Mechanics	2	2	26	4		34
Electricians	2	2	24			30
Metal Trades 5	5	1	24			30
Warehouse Clerks	2	6	21	2		31
Misc. Maint. (Helpers) 6	26	17	110	23	8	184
Utility Labourers 7	6	10	33	255	52	356
TOTALS	102	118	490	701	125	1,536

NOTES:

1. PLANT OPERATORS will be responsible for the operation of process equipment. Most should be experienced and some will require steam tickets.
2. SAMPLERS will be largely unskilled persons.
3. INSPECTORS must be experienced in equipment installation.
4. LAB. - SUPERVISORY & PROFESSIONAL personnel will be highly qualified. Most are now on staff.
5. METAL TRADES is understood to include both sheet metal workers and ironworkers.
6. MISC. MAINTENANCE personnel will serve primarily as tradesmen's helpers. Some should be semi-skilled, but most would be classed as unskilled labour.
7. Most UTILITY LABOURERS will be unskilled workers.

(c) FORT McMURRAY EMPLOYMENT

Table VI provides projections of the development of the labour force working in the Town of Fort McMurray. These projections assume that the Town's population will increase to nearly 20,000 during the next five years and that Syncrude's head office will be located in Edmonton, as presently planned, rather than Fort McMurray.

The occupational distribution of Fort McMurray's labour force was based on a similar community which has as its economic base a large mining operation and is in a remote location served by scheduled air service and a railway.

TABLE VI

PROJECTED OCCUPATIONAL DISTRIBUTION
OF FORT MCMURRAY LABOUR FORCE BY
YEAR 1973 - 78

C.C.D.O. CODE NUMBER	OCCUPATIONAL GROUP	1973	1974	1975	1976	1977	1978
11	Managerial, Administrative & Related Occupations	55	85	115	145	175	200
21	Occupations in Natural Sciences, Engineering and Mathematics	70	115	160	205	250	300
23	Occupations in Social Sciences & Related Fields	15	25	35	45	55	60
25	Occupations in Religion	8	10	11	13	14	15
27	Teaching & Related Occup.	160	205	250	295	340	385
31	Medicine & Health	85	110	135	160	185	200
33	Artistic, Literary, Per- forming Arts & Related Occupations	2	5	8	11	14	15
37	Sport & Recreation	15	20	23	30	35	35
41	Clerical & Related Occup.	170	270	370	470	570	660
51	Sales Occupations	160	205	250	295	335	375
61	Service Occupations	270	330	390	450	500	550
71	Farming, Horticulture, Animal Husbandry Occupations	-	2	4	6	7	10
73	Fishing, Hunting, Trapping & Related Occupations	5	5	5	5	5	5
75	Forestry & Logging Occup.	80	83	85	85	85	85
77	*Mining & Quarrying, Including Oil & Gas Field Occupations	1400	1500	1620	2100	2875	3000
83	Machining & Related Occup.	15	20	25	30	35	35

C.D.O. CODE NUMBER	OCCUPATIONAL GROUP	1973	1974	1975	1976	1977	1978
85	Product Fabricating, Assembling & Repairing Occup.	50	60	70	80	90	110
87	Construction Trades	310	440	380	420	410	410
91	Transport, Equipment Operating	115	135	150	165	180	200
93	Material Handling & Related Occupations	50	60	70	80	90	100
95	Other Crafts & Equipment Operating Occupations	20	35	50	70	80	100
99	Occupations not Elsewhere Classified	25	30	35	40	45	50
	TOTALS	3070	3750	4240	5200	6375	6900

* This occupational category covers all employees of Great Canadian Oil Sands and Syncrude, including administrative, professional and clerical personnel. It should not be considered as a part of Fort McMurray employment because manpower requirements related to the operation of the Syncrude plant have been identified separately.

3. MANPOWER SUPPLY

(a) CONSTRUCTION PHASE

At the present time there is a strong demand for skilled tradesmen in Alberta. This demand arises primarily from a high level of building construction in the cities. Engineering construction activity is moderate at this time, the Imperial Oil Strathcona Refinery project being the only major user of manpower. Shortages are reported in the following trades, particularly outside of the urban centres: welders, heavy duty mechanics, carpenters electricians, plumbers, steamfitters, and insulators. It is expected that the heavy current demand for these skills will slacken once the summer peak has passed.

The present outlook for construction in Alberta during the Syncrude construction phase is for a moderately high level of activity. Building construction should continue at about its current pace, with growth in the residential sector compensating for any reduction in the level of commercial building construction. Major engineering projects now underway or firmly scheduled to proceed in the next four years are:

Imperial Oil Refinery, Edmonton -- Completion Sept. '74

Alberta Gas Chemicals, Medicine Hat --
Methanol plant - Completion Sept. '74
Ammonia - Urea plant - June '74 to Aug. '75

Canada Cement Lafarge, Exshaw -- Spring '74 to Fall '75

Calgary Power Sundance Generating Units 3 & 4,
Wabamun Lake -- Summer '74 to Spring '77

The above listing indicates that most of these major projects will be completed before the Syncrude manpower requirements

become very large. Construction of the Calgary Power generating units will provide significant competition for manpower during the period of Syncrude's peak requirements, from the fall of 1975 through the end of 1976, particularly with respect to boilermakers and pipefitters. The Sundance project will undoubtedly be more attractive from the workers' point-of-view because they will be able to live in Edmonton and will be paid \$16.00 per day for travel time on company busses.

It is most probable that there will be undertaken in the next two to three years other major industrial projects which will affect the manpower supply situation. There is the strong possibility that one or two forestry development projects will be constructed in the Whitecourt-Fox Creek area in the near future. If the proposed Dow Chemical-Dome Petroleum ethylene plant at Fort Saskatchewan is started within the next two years, it will seriously affect the availability of certain tradesmen during the time of Syncrude's highest demand for manpower.

Taking into account the probable level of competition for skilled manpower in Alberta and the remoteness of the Syncrude site, and assuming that substantial utilization of apprentices and other local workers will occur, it has been projected that there will be shortages of the following tradesmen at the time of peak demand: pipefitters (pressure welders, plumbers and steamfitters); boilermakers (pressure welders and steel fabricators); structural ironworkers; and electricians. The shortages of pressure welders, plumbers and steamfitters are expected to be the most severe, as has been the case in the past in Alberta during periods of high

demand.

While actions should be taken to increase the number of persons in those trades in which shortages frequently occur, especially as the outlook is for strong and growing demands for those skills, it would be neither practical nor desirable to develop sufficiently large numbers of tradesmen in Alberta to meet intermittent peak requirements. Instead, it will be necessary to recruit some skilled workers from outside of the Province to satisfy short-term peak demands. Depending upon the levels of construction activity elsewhere in Canada, it may be necessary to look to immigration to meet the demands for certain skills.

(b) SYNCRUDE OPERATING PHASE

There remains at this time a need for additional information with respect to the job specifications and training requirements for many of the operating positions in the Syncrude plant. It is expected that there will be further refinements of the descriptions of the positions and the numbers of workers required after the company has formally announced its intention to proceed with the project.

In general terms, it would appear that most of the senior administrative and technical positions will be filled by persons possessing particular educational and experience qualifications. While some of these people may be found in Alberta, it is probable that many will have to be recruited throughout Canada and perhaps outside of the country. The majority of the plant personnel will be employed as operators of various kinds of

equipment, and as tradesmen and other maintenance personnel. It should be possible to fill many of these positions with persons who have practiced similar skills during the construction phase. In addition, numerous positions requiring minimal skills could readily be filled by local residents with little, if any, preparatory training.

(c) FORT MCMURRAY EMPLOYMENT

As employment opportunities develop within the Town of Fort McMurray, it is anticipated that many positions will be filled by persons migrating from elsewhere in Alberta and from all parts of Canada. This will apply particularly to administrative, technical and professional occupations. At the same time, it would seem reasonable to assume that the spouses of Syncrude employees and of other persons moving into Fort McMurray will occupy a significant number of clerical, sales, service, teaching, health service and other jobs. In addition to the positions filled by in-migration, it is expected that numerous jobs in the town will be taken by northern Alberta residents.

4. EMPLOYMENT OPPORTUNITIES FOR LOCAL RESIDENTS

(a) CONSTRUCTION PHASE

It is the intention of the general contractor, Canadian Bechtel Limited, to utilize apprentices and other local workers to the greatest extent possible during this construction project. It is likely that the opportunities which have been envisioned will in fact materialize because the magnitude of the demand for labour will be such that local workers will be required in substantial numbers to keep the project fully manned at all times. Further, the project is of sufficiently long duration to enable most apprentices and other local workers to reach a satisfactory level of competence or become fully qualified in their jobs by the time the peak manpower demand is reached.

Table VII provides estimates of the potential for the utilization of apprentices on the project, and indicates that nearly 500 employment opportunities will be available during the four year period. In most trades, Canadian Bechtel feels that it is feasible to employ apprentices according to the allowable ratios set out in Alberta's apprenticeship regulations. In the cases of steel fabricators and welders, the utilization estimates reflect the contractor's concern regarding the numbers of apprentices that can be usefully employed and properly trained in relation to the numbers of journeymen on the job.

In Table VIII information is provided on the probable numbers, timing and duration of apprenticeship opportunities in each trade. It is assumed that apprentices will be hired along with journeymen, according to the appropriate ratios, at the

earliest possible dates during the course of the project.

Estimates of the potential for local hiring in non-apprenticeship trades and other occupations at the job site are given in Table IX. It is indicated that as many as 525 job opportunities will be available during the Syncrude construction phase. Combined with the number of apprenticeship openings which have been projected, employment opportunities should be available for approximately 1000 local residents.

TABLE VII

ESTIMATES OF THE POTENTIAL
FOR THE UTILIZATION OF APPRENTICES
DURING THE SYNCRUDE CONSTRUCTION PHASE

APPRENTICESHIP TRADES	PEAK WORK FORCE	LONG-TERM AVERAGE WORK FORCE	ALLOWABLE RATIO -- APPRENTICES: JOURNEYMEN	NUMBER OF APPRENTICES BASED ON ALLOWABLE	LIKELY USABLE RATIO -- APPRENTICES: JOURNEYMEN	NUMBER OF APPRENTICES LIKELY USABLE
Carpenters	270	180	1:5	30	1:5	30
Electricians	540	250	1:1	125	1:1	125
Insulators	255	140	1:4	28	1:4	28
Millwrights	110	50	1:1	25	1:1	25
Plumbers, Steamfitters	750	375	1:2	125	1:2	125
Operating Engineers:						
H.D. Mechanics	30	20	1:2	6	1:2	6
Heavy Equipment Operators	150	120	1:5	20	1:5	20
Steel Fabricators	400	300	1:3	75	1:4	60
Welders:						
Boilermakers	115	100	1:1	50	1:3	25
Pipefitters	250	160	1:1	80	1:3	40
Other Trades	40	30	1:1	15	1:2	10
TOTALS	2910	1725	-	579	-	494

TABLE VIII
PROJECTED NUMBERS, TIMING AND DURATION
OF APPRENTICESHIP OPPORTUNITIES

TRADE	NUMBER OF APPRENTICES EMPLOYED	STARTING DATE	FINISHING DATE	DURATION OF SERVICE (MONTHS)
CARPENTERS:	4	1/74	2/77	37
(4 years Apprenticeship)	3	5/74	12/76	32
	7	6/74	12/76	31
	8	7/74	12/76	30
	2	4/75	11/76	20
	<u>6</u>	5/75	9/76	17
	30			
ELECTRICIANS:	5	4/74	9/77	42
(4 years Apprenticeship)	3	5/74	9/77	41
	2	7/74	8/77	38
	3	8/74	8/77	37
	5	9/74	6/77	34
	7	10/74	4/77	31
	4	12/74	4/77	29
	10	2/75	3/77	26
	13	4/75	2/77	23
	30	5/75	2/77	22
	11	6/75	2/77	21
	11	7/75	1/77	19
	12	8/75	1/77	18
	<u>9</u>	9/75	1/77	17
	125			

TRADE	NUMBER OF APPRENTICES EMPLOYED	STARTING DATE	FINISHING DATE	DURATION OF SERVICE (MONTHS)
INSULATORS:	5	9/75	7/77	23
(3 years Apprenticeship)	6	10/75	5/77	20
	5	11/75	3/77	17
	6	1/76	1/77	13
	<u>6</u>	2/76	1/77	12
	28			
MILLWRIGHTS:	3	10/74	5/77	32
(4 years Apprenticeship)	2	11/74	4/77	30
	2	1/75	3/77	27
	4	2/75	2/77	25
	4	3/75	1/77	23
	3	4/75	12/76	21
	<u>7</u>	5/75	12/76	20
	25			
PLUMBERS, STEAMFITTERS:	5	4/74	8/77	41
	3	5/74	7/77	39
(4 years Apprenticeship)	15	6/74	6/77	37
	8	7/74	5/77	35
	12	9/74	4/77	32
	5	11/74	4/77	30
	9	2/75	4/77	27
	11	3/75	4/77	26

TRADE	NUMBER OF APPRENTICES EMPLOYED	STARTING DATE	FINISHING DATE	DURATION OF SERVICE (MONTHS)
PLUMBERS, STEAMFITTERS: (cont.)	21	4/75	3/77	24
	5	5/75	3/77	23
	17	6/75	2/77	21
	<u>14</u>	7/75	2/77	20
	125			
HEAVY DUTY MECHANICS:	1	11/73	5/77	43
	1	3/74	3/77	37
(4 years Apprenticeship)	1	10/74	2/77	29
	1	11/74	1/77	27
	1	12/74	12/76	25
	<u>1</u>	4/75	11/76	20
	6			
HEAVY EQUIPMENT OPERATORS:	2	11/73	10/76	36
	2	12/73	11/76	36
(3 years Apprenticeship)	2	5/74	4/77	36
	2	10/74	3/77	30
	2	11/74	2/77	28
	3	12/74	2/77	27
	2	3/75	1/77	23
	<u>5</u>	5/75	10/76	18
	20			

TRADE	NUMBER OF APPRENTICES EMPLOYED	STARTING DATE	FINISHING DATE	DURATION OF SERVICE (MONTHS)
STEEL FABRICATORS:	3	5/74	4/77	36
- Boilermakers	3	6/74	3/77	34
- Ironworkers	6	8/74	3/77	32
(3 years Apprenticeship)	8	10/74	2/77	29
	5	11/74	2/77	28
	5	12/74	1/77	26
	7	1/75	1/77	25
	11	4/75	1/77	22
	3	5/75	12/76	20
	<u>9</u>	6/75	11/76	18
	60			
WELDERS:	4	5/74	4/77	36
- Boilermakers	5	6/74	5/77	36
- Pipefitters & Other Trades	4	8/74	7/77	36
(3 years Apprenticeship)	5	10/74	4/77	31
	5	12/74	3/77	28
	7	1/75	3/77	27
	4	3/75	3/77	25
	11	4/75	2/77	23
	15	6/75	1/77	20
	6	7/75	12/76	18
	<u>9</u>	11/75	12/76	14
	75			

TABLE IX
ESTIMATES OF THE POTENTIAL
FOR LOCAL HIRING IN
NON-APPRENTICESHIP TRADES AND OCCUPATIONS
DURING THE SYNCRUDE CONSTRUCTION PHASE

TRADES/ OCCUPATIONS	PEAK WORK FORCE	LONG-TERM AVERAGE WORK-FORCE	LOCAL HIRING		
			INITIAL HIRING DATE	MAXIMUM NUMBER USEABLE	DATE MAXIMUM ATTAINED
Cement Masons	40	30	June/74	15	June/75
Reinforcing Iron- Workers (Rodmen)	70	60	Mar./74	15	June/74
Other Operating Engineers	150	100	Oct./73	40	Apr./75
Teamsters	230	175	Feb./74	120	Dec./75
Labourers and Others	385	240	Oct./73	160	Nov./74
Camp Catering and Maintenance Personnel	315	200	Dec./73	150	Jan./76
Construction Administration and Clerical Personnel	37	25	Jan./74	25	Mar./76
TOTALS	1227	830	-	525	-

(b) SYNCRUDE OPERATING PHASE

As discussed previously under Manpower Supply, it is likely that the senior administrative and technical positions at the plant will be filled by persons who are recruited throughout Canada. However, these will constitute a small minority in terms of the total operating staff.

Approximately three-quarters of the occupations listed in Syncrude's preliminary projection of manpower requirements fall into the following categories: clerical personnel; operations personnel (equipment operators and semi-skilled workers); and trades and maintenance personnel. In addition, there will be about sixty-five positions available for security officers and cafeteria personnel. The nature of almost all of these jobs will be such that they can be filled by local residents who possess the necessary qualifications or who can be prepared for them in the time available.

(c) FORT MCMURRAY EMPLOYMENT

Even though in-migrants to Fort McMurray can be expected to occupy many of the jobs which will be developed there during the next four years, there will remain a substantial number of employment opportunities to be filled by local residents. These opportunities will be available in virtually all occupational groups, but the greatest number will likely be concentrated in the following fields: Clerical and related occupations

Construction trades

Service employment

Sales occupations

Vehicle and equipment operation

Although it is extremely difficult to estimate the number of opportunities which will be available to local residents, it seems reasonable to suggest that it will be in the order of 300 - 500 jobs.

5. TRAINING REQUIREMENTS

(a) CONSTRUCTION PHASE

Many of the people in northeastern Alberta have low educational levels and lack fluency in the English language. They have had little or no experience in normal wage employment. Job readiness courses will be required in most cases to prepare local residents for unskilled or semi-skilled work and for elementary skill training on-the-job. Some will need academic upgrading to improve their ability to communicate in English and to provide them with the educational qualifications required for entry into apprenticeship programs.

Table X which follows provides information with respect to the minimum education requirements, the length of training, and the required number of weeks of trade school training per year for each of the apprenticeship trades that will be utilized on the Syncrude project. Apprentices must be at least 16 years of age. The minimum education requirements can be waived if the applicant is able to pass the entrance examination for the trade he wishes to enter. In general, these examinations focus upon reading comprehension and basic mathematics and science.

For most other construction occupations, the pre-employment training courses mentioned earlier should be sufficient. In the cases of operators of certain heavy equipment and teamsters, it will likely be necessary to provide some institution-based basic skill training prior to employment.

TABLE X

TRAINING REQUIREMENTS FOR
APPRENTICESHIP TRADES

TRADES	Entrance Requirement (Grade)	Length of Training (Years)	Training weeks per year
Carpenter	9	4	8 -8 -8 -8.
*Electrician	10	4	8 -8 -8 -12.
Millwright	10	4	8 -8 -8 -8.
Insulator	9	3	6 -6 -6.
*Plumber	10	4	8 -8 -8 -8.
*Steamfitter	10	4	8 -8 -8 -8.
*Heavy Duty Mechanic	9	4	8 -8 -8 -8.
Heavy Equipment Operator (Crane & Hoisting Equip.)	9	3	Undetermined
* Welder	9	3	6 -6 -6.
Steel Fabricator	10	3	8 -8 -8.

* Also designated under the Tradesmen's Qualification Act, which prohibits from engaging in these trades persons who do not hold certificates of proficiency or who are not apprentices.

(b) SYNCRUDE OPERATING PHASE

Until Syncrude has further defined the specifications for certain positions, particularly in an important category such as Plant Operators, it will not be possible to set out the training requirements for them. However, for most plant occupations that will be available to local residents, the training requirements can readily be determined from the job title.

Secretaries, steno-typists, and general clerical personnel will have completed the appropriate business education courses.

Operators of heavy equipment, vehicles and other machinery will require training on such equipment either at an educational institution or on-the-job. It is anticipated that many of these positions will be occupied by persons who obtained their operating skills during the plant construction phase.

Personnel working in the construction trades will either be involved in apprenticeship programs or have completed them. As with the equipment operators, it is likely that a significant number of the tradesmen will have obtained their journeyman status or have partially completed their apprenticeship programs during the construction phase.

Workers employed as oilers, drillers, rodmen, samplers, warehouse clerks, miscellaneous maintenance personnel and utility labourers will be unskilled for the most part, although some might be classed as semi-skilled. It is likely that this will apply to most of those employed as security and cafeteria personnel as well. These people should receive academic upgrading to the

extent that it is required and they should participate in job readiness courses which would familiarize them with safety procedures, labour relations matters, and the industrial work situation in general. Beyond this basic pre-employment training, it is envisioned that all necessary skills would be learned on-the-job, except perhaps in a limited number of occupations which would require basic skill development courses of short duration in an institutional setting.

(c) FORT MCMURRAY EMPLOYMENT

The principal training requirement to prepare residents for employment in the town will be academic upgrading courses to overcome any language difficulties and to provide them with basic mathematical skills. With that background, it is expected that persons engaged in most sales and service occupations will obtain their training on-the-job. For clerical and related occupations, preparation will involve completion of the appropriate business education courses. Those working in the construction trades will participate in apprenticeship or informal on-the-job training, depending upon the trades in which they are employed. Persons who are inexperienced in the operation of heavy equipment and transport vehicles will likely require basic training in an institution prior to employment.

6. TRAINING CAPABILITY

Training facilities in northeastern Alberta are located at Fort McMurray, Lac La Biche, Kikino, Janvier and Fort Chipewyan. The facilities at Fort McMurray are most complete and sophisticated while the facilities at Kikino, Fort Chipewyan and Janvier are comparatively small and rudimentary. Table XI indicates the capacity of each of the training centres in northeastern Alberta. The table also indicates the number of spaces available in residence units. Table XII gives the present training capacity of the Alberta Vocational Centre at Fort McMurray. It indicates the range of courses offered and the capacity available in each of the courses. If necessary the capacity of institutions in northeastern Alberta can be supplemented by partial use of capacity available in Grouard, Fairview and Vermilion. This total capacity is documented in Table XIII, Inventory of Institutional Training Spaces in Northern Alberta.

It is expected that the types of training required for jobs that would be available to presently unskilled people living in northern or northeastern Alberta would be academic upgrading, pre-employment or pre-apprenticeship training, and clerical or business education. These types of training would provide basic skills for people wishing to be employed in construction jobs, as support staff, or in clerical-type jobs during the construction phase. They would also provide preparation for training-in-industry or training-on-the-job activities related to full-time employment in the Syncrude plant and to many employment opportunities that will develop in the Town of Fort McMurray.

It is expected that the majority of the more advanced types of training, especially those related to apprenticeship programs, will take place in such institutions as N.A.I.T. where facilities and courses are already in place. If people in northeastern Alberta indicate a major interest in one or two apprenticeship trades, it might be advisable to set up the technical training in those particular trades at a location in that region, probably at Fort McMurray.

If the Alberta Vocational centres at Fort McMurray and Lac La Biche were dedicated totally to training related to Syncrude and accompanying developments, those institutions could easily graduate 400 - 500 people per year. This capacity will likely be adequate to meet the local demand for training. If Syncrude has a training demand beyond that volume, it will likely have to be met by people recruited and trained outside of the area. There should be adequate training capacity elsewhere in the province to meet such a contingency.

It is probably advisable for the initial stages of training, especially for native people, to be undertaken as close to home as possible. The facilities presently available at Fort Chipewyan, Kikino and Janvier should be devoted to early stages of training, especially in the area of academic upgrading. Similar facilities may also be required at other locations in northeastern Alberta, such as the Cold Lake Elizabeth Colony area.

Specific skills required during the operational phase of the Syncrude project still require some definition. It is

anticipated, however, that the majority of the jobs which will be available to local people will be of the type for which the training could be obtained during the construction phase or for which the basic skills could be acquired through participation in pre-employment courses. The workers' basic skills could then be supplemented by a training-on-the-job or a training-in-industry program operated by the company itself.

TABLE XI

INSTITUTIONAL TRAINING CAPABILITY
IN NORTHEASTERN ALBERTA

(Number of training spaces)

Institution	Maximum		75% Utilization		Current Peak Usage		Residence Capacity			
	Shop	Cr*	Shop	Cr*	Shop	Cr*	M	F	Married	Total
V.C. Ft. McMurray	156	140	117	105	140	90	110	42	15	167
V.C. Lac La Biche	54	115	40	86	22	115	60	30	-	90
ikino Mobile	-	20	-	15	-	-	-	-	-	-
t.Chipewyan Mobile	6	10	4	7	-	-	-	-	-	-
anvier Mobile	6	30	4	22	-	-	-	-	-	-
TOTALS	222	315	165	235	162	205	170	70	15	257

* Classroom Spaces

TABLE XII

PRESENT TRAINING CAPACITY OF ALBERTA
VOCATIONAL CENTRE, FORT McMURRAY

1. HEAVY INDUSTRIAL SHOP FACILITY

(a) Heavy Equipment	- 108 trainees per year
(b) Career Driving	- 50 trainees per year
(c) Pipe Laying	- 40 trainees per year

2. MEDIUM

(a) Automotives	- 32 trainees per year
(b) Building Construction	- 40 trainees per year
(c) Pipe Trades	- 32 trainees per year
(d) Welding	- 60 trainees per year (plus 30 journeymen welding upgrading trainees per year)

3. LIGHT

(a) Cooking	- 32 trainees per year
(b) Cooking Upgrading (8 week course)	- 30 trainees per year
(c) Millwright & Small Engine	- 48 trainees per year

4. CLASSROOM

(a) Clerical & Stenographic	- 40 trainees per year
(b) Academic Oriented Courses	- 100 trainees per year

TABLE XIII

INVENTORY OF INSTITUTIONAL TRAINING
SPACES IN NORTHERN ALBERTA

	MAXIMUM		75% UTILIZATION		CURRENT PEAK USAGE		RESIDENCE CAPACITY			
	Shop	Cr*	Shop	Cr*	Shop	Cr*	M	F	Married	Total
V.C. Ft. McMurray	156	140	117	105	140	90	110	42	15	167
V.C. Lac La Biche	54	115	40	86	22	115	60	30	-	90
St. John's Mobile	-	20	-	15	-	-	-	-	-	-
Chipewyan Mob.	6	10	4	7	-	-	-	-	-	-
St. Xavier Mobile	6	30	4	22	-	-	-	-	-	-
V.C. Grouard	70	200	52	150	30	180	74	54	-	128
St. Mary's College	108	77	81	57	84	62	124	50	-	174
St. Michael's College	598	550	448	412	188	164	160	5	-	210
TOTALS	998	1142	746	854	464	611	528	226	15	769

7. CURRENT LOCAL SITUATION

(a) LOCAL LABOUR FORCE

This analysis of the local labour force encompasses six areas in northern Alberta, all but one of which lie north of the principal agricultural regions in the province. The exception, the Bonnyville - St. Paul area, was included because of the large numbers of native people living there. The six areas are illustrated in the map on page 55.

The 1971 population in those areas of northern Alberta was 73,380, of which 43,735 were 15 years of age or over, and it is projected that by 1978 the population will increase to about 100,000.

It has been estimated that the labour force in 1971 totalled roughly 23,500 and that it was made up of 2,650 Treaty Indians, 1,150 registered Metis people, and 19,700 others. Although it is difficult to estimate the composition of the "others" category, it is evident that it includes significant numbers of unregistered Metis and non-treaty Indians. It is forecast that the total local labour force will increase to about 30,600 by 1978 as the result of natural growth. The reason for this rapid increase in the size of the potential labour force is the predominance of the young in the native population.

The Treaty Indian labour force is projected to grow by about 950 or 36 percent during the period from 1971 to 1978. Most of these people reside on reserves or in small isolated communities. Over 40 percent live in the Bonnyville - St. Paul

area, and the next heaviest concentrations occur in the Lesser Slave Lake and North Peace River - Fort Vermilion areas.

The registered Metis labour force will increase by roughly 450 persons or 40 percent during the forecast period. These people are located both in Metis colonies and in small communities throughout the northern region. More than 40 percent of them live in the Lesser Slave Lake area and about 20 percent in the vicinity of Lac La Biche.

The labour force in the "others" category is expected to grow from 19,700 to about 25,400, or by approximately 29 percent, during the seven year period. It would appear that nearly two-thirds of these people are non-natives, most of whom live in the urban centres or in the agricultural area around St. Paul and Bonnyville. The remainder of this category is comprised of unregistered Metis and non-treaty Indians. Their residence and population growth characteristics will likely be similar to those of the other native people in the region.

The present unemployment rate among the native peoples in northern Alberta is very high, as most of the available work is either of a casual or seasonal nature. Very few of them obtain employment outside of their home communities because of their lack of marketable skills and reluctance to move.

The tables which follow indicate the natural growth of the potential labour force in each of the six areas and in the northern region as a whole. For purposes of this analysis, it was assumed that there would be neither in-migration nor out-

migration affecting the growth of the labour force in those areas. This method of analysis reveals the expectation that the potential growth in the local labour force will exceed the projected rate of job creation in the region during the forecast period, resulting in a larger labour surplus in 1978 than that which existed in 1971. However, migration will in fact occur and it is likely that most of the labour force surplus will move to the larger southern centres for employment opportunities, as has been the case in the past.



TABLE XIV

LABOUR FORCE PROJECTIONS -
LAC LA BICHE AREA (1)

YEAR	(2) LABOUR FORCE	ANNUAL NET CHANGE IN LABOUR FORCE				(3) EMPLOY- MENT	ANNUAL CHANGE IN REGULAR EMPLOYED	CUMULATIVE NO. UNEMPLOYED OR SURPLUS
		TI.	M.	O.	Tot.			
1971	1,866	-	-	-	-	1,750	-	116
1972	1,935	3	13	53	69	1,750	-	185
1973	2,003	3	13	52	68	1,750	-	253
1974	2,073	2	13	55	70	1,750	-	323
1975	2,142	3	14	52	69	1,750	-	392
1976	2,212	3	14	53	70	1,750	-	462
1977	2,284	4	17	51	72	1,750	-	534
1978	2,356	3	16	53	72	1,750	-	606
TOTAL		21	100	369	490		-	
TOTAL CHANGE 1971-78	490							490

- 1) The Lac La Biche area had a 1971 population of 5,580, of which 3,390 were 15 years of age and over. The labour force consisted of 64 Treaty Indians, 256 registered Metis and 1,546 "others" for a total of 1,866.
- 2) A 1971 participation rate of 55.0 percent was projected to rise to 55.8 percent in 1978. The labour force figures represent the net natural growth of the local labour force assuming no in/out migration.
- 3) Employment in the local area was assumed to remain constant during the period.

TABLE XV

LABOUR FORCE PROJECTIONS -
BONNYVILLE - ST. PAUL AREA (1)

YEAR	(2) LABOUR FORCE	ANNUAL NET CHANGE IN LABOUR FORCE				(3) EMPLOY- MENT	ANNUAL CHANGE IN REGULAR EMPLOYED	CUMULATIVE NO. UNEMPLOYED OR SURPLUS
		Tl.	M.	O.	Tot.			
1971	11,612	-	-	-	-	11,000	-	612
1972	12,114	57	6	439	502	11,000	-	1,114
1973	12,614	57	7	436	500	11,000	-	1,614
1974	13,113	56	8	435	499	11,000	-	2,113
1975	13,609	59	7	430	496	11,000	-	2,609
1976	14,105	62	8	426	496	11,000	-	3,105
1977	14,570	71	8	386	465	11,000	-	3,570
1978	15,035	68	9	388	465	11,000	-	4,035
TOTAL		430	53	2940	3423		-	
TOTAL CHANGE 1971-78	3,423					-		3,423

- 1) The Bonnyville - St. Paul area had a 1971 population of 36,430 (including the Armed Forces Base at Medley), of which 20,705 were in the civilian population and were 15 years of age and over. The labour force consisted of 1,174 Treaty Indians, 134 registered Metis and 10,304 "others" for a total of 11,612.
- 2) The 1971 participation rate of 56.1 percent is projected to rise to 57.2 percent in 1978. The labour force figures represent the net natural growth of the local labour force assuming no in/out migration.
- 3) Employment in the local area was assumed to remain constant during the period.

TABLE XVI
LABOUR FORCE PROJECTIONS -
LESSER SLAVE LAKE AREA (1)

YEAR	(2) LABOUR FORCE	ANNUAL NET CHANGE IN LABOUR FORCES				(3) EMPLOY- MENT	ANNUAL CHANGE IN REGULAR EMPLOYED	CUMULATIVE NO. UNEMPLOYED OR SURPLUS
		Ti.	M.	O.	Tot.			
1971	4,745	-	-	-	-	3,625	-	1,120
1972	4,939	33	24	137	194	3,825	200	1,114
1973	5,133	31	24	139	194	4,625	800	508
1974	5,325	32	25	135	192	5,025	400	300
1975	5,517	33	27	132	192	5,300	275	217
1976	5,718	35	26	140	201	5,300	-	418
1977	5,928	45	32	133	210	5,300	-	628
1978	6,136	44	29	135	208	5,300	-	836
TOTAL		253	187	951	1391		1,675	
TOTAL CHANGE 1971-78	1,391					1,675		- 284

- 1) The Lesser Slave Lake area had a 1971 population of 14,245, of which 8,210 were 15 years of age and over. The labour force consisted of 682 Treaty Indians, 478 registered Metis and 3,585 "others" for a total of 4,745.
- 2) A 1971 participation rate of 57.8 percent was projected to rise to 58.6 percent in 1978. The labour force figures represent the net natural growth of the local labour force assuming no in/out migration. The local labour force will supply some of the workers for the jobs developing in Slave Lake but a net surplus will continue.
- 3) Employment growth will take place in Slave Lake as development of the forestry-based industry continues.

TABLE XVII

LABOUR FORCE PROJECTIONS -

NORTH PEACE - FORT VERMILION AREA (1)

YEAR	(2) LABOUR FORCE	ANNUAL NET CHANGE IN LABOUR FORCES				(3) EMPLOY- MENT	ANNUAL CHANGE IN REGULAR EMPLOYED	CUMULATIVE NO. UNEMPLOYED OR SURPLUS
		Tl.	M.	O.	Tot.			
1971	2,315	-	-	-	-	2,100	-	215
1972	2,415	23	4	73	100	2,100	-	315
1973	2,514	22	3	74	99	2,100	-	414
1974	2,612	23	2	73	98	2,100	-	512
1975	2,712	24	3	73	100	2,100	-	612
1976	2,811	25	3	71	99	2,100	-	711
1977	2,942	36	4	91	131	2,100	-	842
1978	3,072	34	4	92	130	2,100	-	972
TOTAL		187	23	547	757		-	
TOTAL CHANGE 1971-78	757					-		757

- 1) The North Peace - Fort Vermilion area had a 1971 population of 7,935, of which 4,190 were 15 years of age and over. The labour force consisted of 546 Treaty Indians, 58 registered Metis and 1,711 "others" for a total of 2,315.
- 2) A 1971 participation rate of 55.3 percent was projected to rise to 55.8 percent in 1978. The labour force figures represent the net natural growth of the local labour force assuming no in/out migration.
- 3) Employment in the local area was assumed to remain constant during the period.

TABLE XVIII

LABOUR FORCE PROJECTIONS -
FORT CHIPEWYAN AREA (1)

YEAR	(2) LABOUR FORCE	ANNUAL NET CHANGE IN LABOUR FORCES				(3) EMPLOY- MENT	ANNUAL CHANGE IN REGULAR EMPLOYED	CUMULATIVE NO. UNEMPLOYED OR SURPLUS
		Ti.	M.	O.	Tot.			
1971	382	-	-	-	-	325	-	57
1972	400	2	5	11	18	325	-	75
1973	419	2	5	11	19	325	-	94
1974	438	3	5	11	19	325	-	113
1975	457	2	6	11	19	325	-	132
1976	476	3	5	12	19	325	-	151
1977	497	2	6	13	21	325	-	172
1978	519	2	6	14	22	325	-	194
TOTAL		16	38	83	137		-	
TOTAL CHANGE 1971-78	137					-		137

- 1) The Fort Chipewyan area had a 1971 population of 1,370, of which 735 were 15 years of age and over. The labour force consisted of 65 Treaty Indians, 96 registered Metis and 221 "others" for a total of 382.
- 2) The 1971 participation rate of 52.0 percent was projected to rise to 52.3 percent in 1978. The labour force figures represent the net natural growth of the local labour force assuming no in/out migration.
- 3) Employment in the local area was assumed to remain constant during the period.

TABLE XIX

LABOUR FORCE PROJECTIONS -

FORT McMURRAY AREA (1)

YEAR	(2) LABOUR FORCE	ANNUAL NET CHANGE IN LABOUR FORCES				(3) EMPLOYMENT		ANNUAL CHANGE IN REGULAR EMPLOYED	CUMULATIVE NO. UNEMPLOYED OR SURPLUS	
		TI.	M.	O.	Total	Reg- ular	Cons- truct.		Reg.	Const.
1971	2,644	-	-	-	-	2550	-	-	94	94
1972	2,751	4	7	96	107	2650	-	100	101	101
1973	2,858	5	6	96	107	3470	185	820	-612	-797
1974	2,971	4	8	101	113	4050	1343	580	-1079	-2422
1975	3,084	5	8	100	113	4640	3155	590	-1556	-4711
1976	3,198	4	7	103	114	5600	3800	960	-2402	-6202
1977	3,332	7	9	118	134	6825	2035	1225	-3493	-5528
1978	3,471	6	8	125	139	7400	-	575	-3929	-3929
TOTAL		35	53	739	827			4850		
TOTAL CHANGE 1971-78		827				4850			-4023	

- 1) The Fort McMurray area had a 1971 population of 7,920, with 4,505 being 15 years of age and over. The Treaty Indian labour force was 112, registered Metis 136 and "others" 2,396 for a total of 2,644.
- 2) A 1971 participation rate of 58.7 percent was projected to rise to 61.5 percent by 1978. The labour force figures represent the net natural growth of the local labour force assuming no in/out migration. Because the local labour force will not supply sufficient workers, a shortage of labour in the area is indicated.
- 3) Employment growth in regular or permanent jobs will occur as the Syncrude development proceeds. The regular employment figures do not include the manpower required for construction of the Syncrude plant which has been shown separately.

TABLE XX

LABOUR FORCE PROJECTIONS -
SIX NORTHERN ALBERTA AREAS (1)

YEAR	(2) LABOUR FORCE	ANNUAL NET CHANGE IN LABOUR FORCES				(3) EMPLOY- MENT	ANNUAL CHANGE IN REGULAR EMPLOYED	CUMULATIVE NO. UNEMPLOYED OR SURPLUS
		Tl.	M.	O.	Tot.			
1971	23,564	-	-	-	-	21,350	-	2,214
1972	24,554	122	59	809	990	21,650	300	2,904
1973	25,541	120	58	809	987	23,270	1,620	2,271
1974	26,532	120	61	810	991	24,250	980	2,282
1975	27,521	126	65	798	989	25,115	865	2,406
1976	28,520	132	63	804	999	26,075	960	2,445
1977	29,553	165	76	792	1033	27,300	1,225	2,253
1978	30,359	157	72	807	1036	27,875	575	2,714
TOTAL		942	454	5629	7025		6,525	
TOTAL CHANGE 1971-78	7,025					6,525		500

- 1) The population in the six northern areas in 1971 totalled 73,380, of which 43,735 were 15 years of age and over. The labour force consisted of 2,643 Treaty Indians, 1,158 registered Metis and 19,763 "others" for a total of 23,564.
- 2) The 1971 participation rate of 56.5 percent was projected to rise to 58.1 percent in 1978. The labour force figures represent the net natural growth of the local labour force assuming no in/out migration.
- 3) Employment growth will occur primarily in the Fort McMurray and Lesser Slave areas during the period from 1971 to 1978.

(b) NATIVE COMMUNITY PROBLEMS AND NEEDS

One of the priorities in the industrial development of northeastern Alberta and the priority highly supported and recommended by the Manpower Development Committee is that of ensuring employment opportunities for all residents of that area. A large proportion of the residents of northeastern Alberta are native people living in small isolated communities. Frequently in industrial development projects of this magnitude, the involvement of local native people has been minor and somewhat haphazard. This has often left native people in their local communities with no improvement in their situation as a result of the industrial development, and sometimes their situation has deteriorated due to increased exposure to the wider society and some of the negative aspects of that society. The Indian Association of Alberta and the Metis Association of Alberta have stressed that this situation must not occur in northeastern Alberta. In order to prevent a recurrence of the negative effects of industrial development on native communities there are two problem areas which must be examined and solved simultaneously:

- i) Native people must have opportunities for employment in the industrial development activity. This means such programs as information services and counselling services must be provided in local communities so that people can become aware of employment availability. Local people must have the opportunity to acquire the necessary skills and work attitudes so that they can become successful in the industrial work setting.

Employers must be made aware of and assisted in taking advantage of opportunities to change the work environment so that it is more attractive to local people. Follow-up and support counselling and other services must be available and housing of a suitable nature must be provided for people who wish to take advantage of the employment opportunities. Alternatives to moving to such centres as Fort McMurray must be explored. One of these alternatives could be a commuting service.

ii) Community improvement and community leadership development must take place in all local communities so that the people remaining in those communities can benefit from the positive aspects of industrial development activity. This will require:

- a more coordinated approach to the delivery of provincial social services to the communities,
- awareness and leadership development programs in local communities to study economic and social development problems and potentials,
- development of local government activities,
- development of local economic development projects,
- development and improvement of local opportunities for training and recreational activities.

In relation to the first problem area, there are several proposals which have been submitted by the native organizations or in co-operation with the native organizations. These are as follows:

- The joint Syncrude-Indian Association of Alberta and Metis Association of Alberta proposal submitted to the Alberta Government in July, 1972.
- The Indian Association of Alberta proposal entitled "A Proposal for Native Participation in the Development of Northern Alberta". This proposal was submitted to the Federal Government several months ago and was recently submitted to the Manpower Development Committee for its consideration.
- A proposal by the Indian Association of Alberta entitled "A Proposal for the Development of Indian Communities in Northern Alberta". This particular proposal has not been formally submitted to the Manpower Development Committee but has been submitted to the Federal Government.

There is general agreement among the Indian Association, the Metis Association and the Northeastern Alberta Manpower Development Committee with respect to the objectives and the philosophy of native involvement. However, the major issue still to be resolved is the method of achieving these objectives. It is evident that there is a major role to be played by the Indian Association and the Metis Association, as well as by provincial, federal and local levels of government. The details as to the specific roles and responsibilities of each of these parties must still be determined.

The Northeastern Alberta Manpower Development Committee has not seen itself as being centrally concerned with the community improvement and development aspects of the industrial development in the region. However, the Committee is cognizant that unless such development and improvement does take place most of the efforts related to providing employment opportunities for local people will be unsuccessful. The Committee has held discussions with the people in the community of Janvier in an attempt to define some of their priorities for development. One of these priorities seems to relate to adult education and it has been agreed that the former NewStart facilities should be moved onto the Northland School Division property adjacent to the existing school. This type of activity is to be undertaken in other communities in northeastern Alberta. It is essential that economic and social improvement programs proceed as rapidly as possible in the affected communities so that the negative aspects of the industrial development can be alleviated.

8. PROGRAM RECOMMENDATIONS

(a) TRAINING PROGRAMS

The objectives of the training programs should be to ensure that individuals, particularly those now resident in the northern areas of the province, secure and maintain satisfying employment, and that employers will have available to them sufficient numbers of competent workers. The Committee has identified the major requirements for training related to the Syncrude project and associated developments in northeastern Alberta. In order to meet the needs which have been identified, the following recommendations are made with respect to the nature and locations of training programs:

i) The Department of Advanced Education, in view of its institutional capability and extensive experience, should play a central role in developing and offering training programs.

The Advanced Education training facilities at Fort McMurray and Lac La Biche should be devoted primarily to training for the employment opportunities which will be created as the result of oil sands development.

ii) The Committee accepts that insofar as possible initial training should take place in or near the home communities of the people being trained. It is, therefore, recommended that the former NewStart facilities at Fort Chipweyan, Janvier and Kikino be utilized for this type of training and that consideration be given by Advanced Education to the establishment of additional community training centres where there are sufficient concentrations of population desiring this kind of service.

Initial training of small community centres should be limited to academic upgrading and job readiness courses. Following such initial preparation, interested and motivated individuals could transfer to one of the institutions offering further skill training. Others, who wish to accept employment with little or no skill requirement, would be able to move directly to the work situation.

To the extent that it is possible, each community training centre should have on its staff one or more educational technicians who speak the local native language.

iii) Basic skill training and pre-apprenticeship training should be offered primarily at A.V.C. Fort McMurray and A.V.C. Lac La Biche, but particular programs could be provided by A.V.C. Grouard, Vermilion College and Fairview College. This training might be offered in blocks of twelve to sixteen weeks. It is envisioned that most trainees would receive a mixture of academic upgrading and skill training, the course content varying according to the nature of the occupations for which they are being prepared.

iv) In general, it is the recommendation of the Committee that insofar as possible skill training should take place on-the-job. Institutional training for local people should be mainly of the pre-employment type.

Training on-the-job funds should be used to encourage employers in the construction phase to utilize as many apprentices and other trainees as possible, especially those whose home residence is in northern Alberta.

v) As soon as further definition of the specifications for operating positions at the Syncrude plant is available, appropriate programs for the preparation of technically competent operators must be developed.

The initial funding of institutional training should be undertaken by the Department of Advanced Education with subsequent partial reimbursement, through the purchase of training places arrangement, from the federal Department of Manpower and Immigration, and Indian Affairs and Northern Development.

(b) COMMUNITY LEADERSHIP DEVELOPMENT

It is recommended that in order to assist in the development and improvement of communities in northern Alberta, an intensive community leadership development program be undertaken with a view to the establishment of a type of self-government in each of the native communities.

The budget for this program should come from the Alberta Indian and Metis Liaison Group and it should be conducted under the general supervision of that body. However, the development of such a program should be carried out in consultation with the two native associations and the local communities, and the implementation should be shared among all these groups as well as other federal and provincial agencies.

The development of community training centres could make a significant contribution to the success of this type of program.

(c) IDENTIFICATION OF LOCAL NEEDS AND ASPIRATIONS

It is essential that the needs and aspirations of local residents be determined, and it is recommended that the identification process be carried out as follows:

i) Needs and aspirations should be identified at the community level, and this can probably be accomplished through community meetings and consultation with the local leadership. In a community where a training centre is operational, its staff could assist with the identification process.

The funding for this activity should come through the Alberta Indian and Metis Liaison Group, which should be responsible for the general supervision of the program. Program planning should be done in consultation with the native associations. The implementation should involve major participation by the associations, as well as by the appropriate federal and provincial agencies.

ii) The needs and aspirations of local residents must be identified on an individual or family basis. This must be done in order to ensure that:

- information on employment opportunities is adequately disseminated and interpreted,
- individual and family aspirations as to employment, training, and relocation can be adequately determined.

This should not simply be a research inventory activity but should be a part of the counselling support services. Information gathered by the counsellor-interviewers should be forwarded to:

- the program planning staff so that adequate programming can be developed, and
- the counselling staff, in order to follow-up on people who have expressed a desire to take advantage of the employment opportunities that are created.

The funding for this activity should come from Canada Manpower and Immigration, and the Alberta Departments of Manpower and Labour, and Advanced Education. The counsellor-interviewers involved should be able to speak the appropriate native languages. They could possibly be employed by a native organization, or they could be employees of either the Federal or the Provincial Government seconded to a native organization for purposes of this specific project.

(d) HOUSING PROGRAMS

It is recommended that an adequate housing program for the projected population expansion be undertaken. This program should be particularly concerned with the needs of native people who become employed by Syncrude or associated developments in the area, recognizing that they face special transitional problems in moving from a rural subsistence life style to an urban-industrial situation. During the transition stage, housing subsidization should be provided and it should be based on the level of family income. This transitional housing, however, should be provided contingent upon the head of the family being employed and upon the family's participation in the various support activities which would be carried out. People in a transitional situation often have multiple problems, and proper

use and maintenance of a house is usually dependent upon the simultaneous solution of these problems. The housing program, therefore, should be coupled with specialized counselling and other support activities related to employment and family adjustment.

Funding for this housing program should come from the Alberta Housing Corporation, Central Mortgage and Housing Corporation, and the Department of Indian Affairs and Northern Development. The counselling services should be funded by the Department of Health and Social Development, with possible participation from the Department of Indian Affairs and Northern Development, and the provincial Departments of Manpower and Labour and Advanced Education. Implementation of the counselling services could be handled directly under government auspices or contracted to an appropriate private or native organization.

(e) POSSIBLE DEVELOPMENT AT FORT MCKAY

Consideration of the development of a new town in the Fort McKay area should be undertaken immediately. Fort McKay is within easy commuting distance of both the Syncrude and the G.C.O.S. plants and it could serve as an alternative relocation destination for native people who desire employment in the oil sands developments.

Initiation of this study should be the responsibility of the Department of Municipal Affairs and the Alberta Housing Corporation. If it is to fulfill the needs of native people, there will need to be close involvement of the Indian Association of Alberta, the Metis Association of Alberta, the Department of

Indian Affairs and Northern Development, and the Alberta Indian and Metis Liaison Group in the consideration of this matter.

(f) PLACEMENT SERVICES

It is recommended that placement services in the local area be expanded in order that an adequate awareness of employment opportunities can be maintained among the local population and that placements in employment can be followed up at regular intervals to determine the extent of work adjustment, employment success and employer satisfaction.

The budget for these activities should come from Canada Manpower and Immigration and the Department of Manpower and Labour. They should be carried out by Canada Manpower and Immigration, with assistance from the native organizations and the appropriate provincial departments.

(g) JOB RETENTION AND FAMILY COUNSELLING PROGRAMS

It is recognized that often the barrier to native people obtaining and retaining employment is not the lack of specific skills, but a lack of job experience, familiarity with urban life and the industrial work setting, and understanding of the kinds of personal inter-relationships expected on the job.

Therefore, the Committee recommends that, in addition to the pre-employment orientation that is provided during job readiness training, there be developed continuing counselling and work adjustment programs in order that people with special employment problems can overcome their difficulties. This counselling service should be concerned not only with the worker, but should

deal with family problems and the individual adjustment problems of family members. Priority should be given to families making major cultural and social transitions, and one component of the counselling service should probably relate exclusively to those people in the transitional housing program discussed earlier. However, the program as a whole should be of service to a broader base of clientele. Since Fort McMurray will be composed of large numbers of persons newly arrived from elsewhere in Alberta and throughout Canada, significant personal and family adjustment problems can be expected.

Funding should be provided by the Department of Health and Social Development, the Department of Manpower and Labour, Canada Manpower and Immigration, the Alberta Department of Agriculture (Home Economics Branch), and possibly the Department of Indian Affairs and Northern Development. The Department of Health and Social Development should take the initiative in program planning, but it should be carried out in consultation with the native organizations and the other government departments listed above, and it should be based upon the local needs and aspirations identified in recommendation (c). The implementation of these counselling services could be handled through several departments, and certain aspects could be contracted to appropriate private or native organizations.

(h) RECREATION AND LEISURE PROGRAMS

The recreation and leisure needs of Fort McMurray, Fort McKay and other northern communities, as well as those of the workers living in construction camps, must be examined and planning must be undertaken to ensure that these needs are met.

The responsibility for this activity should rest with

the Department of Culture, Youth and Recreation, with funding coming primarily from that source. Involvement of local people in the identification of their needs is vital. Recreation and leisure needs should include all of the elements related to social integration of the community. Consideration should be given to the implementation of the regional recreation development concept in northeastern Alberta. Assistance in developing and implementing this program might be sought from the Department of Health and Social Development, the Department of Advanced Education, and the native organizations.

(i) COMMUTING SERVICES

Because of the difficulties in adjustment to the urban life style that would be faced by native people, it would probably be preferable for many native workers to continue to reside in their home communities provided that they were within reasonable proximity of the work location.

It is, therefore, recommended that the possibility of providing regular commuting services between the Syncrude and Fort McMurray job sites and various native communities in the area be explored as an alternative to relocation. Fort McKay should receive particular attention in this regard.

Responsibility for this feasibility study should be undertaken by the Alberta Indian and Metis Liaison Group, and there should be close consultation with the two native associations.

(j) SPECIAL APPRENTICESHIP PROGRAMS

In view of the numbers of apprentices who will be employed in the area, it is recommended that regional offices of the Apprenticeship and Tradesmen's Qualifications Branch and the Department of Advanced Education be established at Fort McMurray as soon as possible after Syncrude indicates that the project will proceed.

It is anticipated that virtually all of the construction workers will be accommodated in a camp at the plant site. This should provide an excellent opportunity for the offering of special courses during the evenings, and possibly on weekends, for apprentices and for the upgrading of journeymen's skills. It is envisioned that the inducement for apprentices to participate in these courses would be appropriate reduction in the length of the apprenticeship programs in which they are involved. Another possibility which should be considered for the Syncrude project is that of providing apprentices with their technical classroom instruction in block release time during regular weekly working hours, rather than during a period of up to twelve weeks per year.

Where there is a demonstrated need for such action, flexibility should be introduced to the standard apprenticeship programs. Discussions have taken place with the Apprenticeship and Tradesmen's Qualifications Branch with respect to the actions which could be taken to alleviate the anticipated shortage of pressure welders. The result was an agreement to accelerate the second period of the program for apprentice welders, by means of an extension of the trade school training course in that period,

thereby shortening the total program to thirty months from the standard three years. It is recommended that the manpower demand-supply situation at the project be closely monitored, with a view to taking similar action on the program for other trades if the need should arise.

9. ORGANIZATIONAL RECOMMENDATIONS

There are two major problems to be solved in setting up an organization related to the development of northeastern Alberta. The first problem is to coordinate and integrate the various manpower programs, and the second is to relate the manpower programming to the overall development of northeastern Alberta. Coordination of these activities must be handled at the planning level as well as the program implementation level. Figure I and II propose organizational structures to solve these problems.

The coordination of manpower concerns and activities can be handled by the organization proposed in Figure I. The structures illustrated on the right side of the page relate to the planning-programming functions, while the structures proposed on the left side of the page relate to program implementation. With respect to manpower concerns and activities, both sides of the structure report to the Federal-Provincial Manpower Needs Committee.

The Northeastern Alberta Manpower Development Committee would continue to operate out of Edmonton but would be reoriented from its present role of dealing with the more general issues of manpower development to the more specific program planning issues. Its membership would be expanded to include representatives from Syncrude, Canadian Bechtel, and labour organizations. The Manpower Programs Implementation Committee would operate out of Fort McMurray. It would be responsible for the implementation of those manpower programs developed by the Manpower Development Committee

and approved by the Federal-Provincial Manpower Needs Committee. Its membership would include those provincial and federal departments and agencies having appropriate program responsibilities and related budgetary capacities.

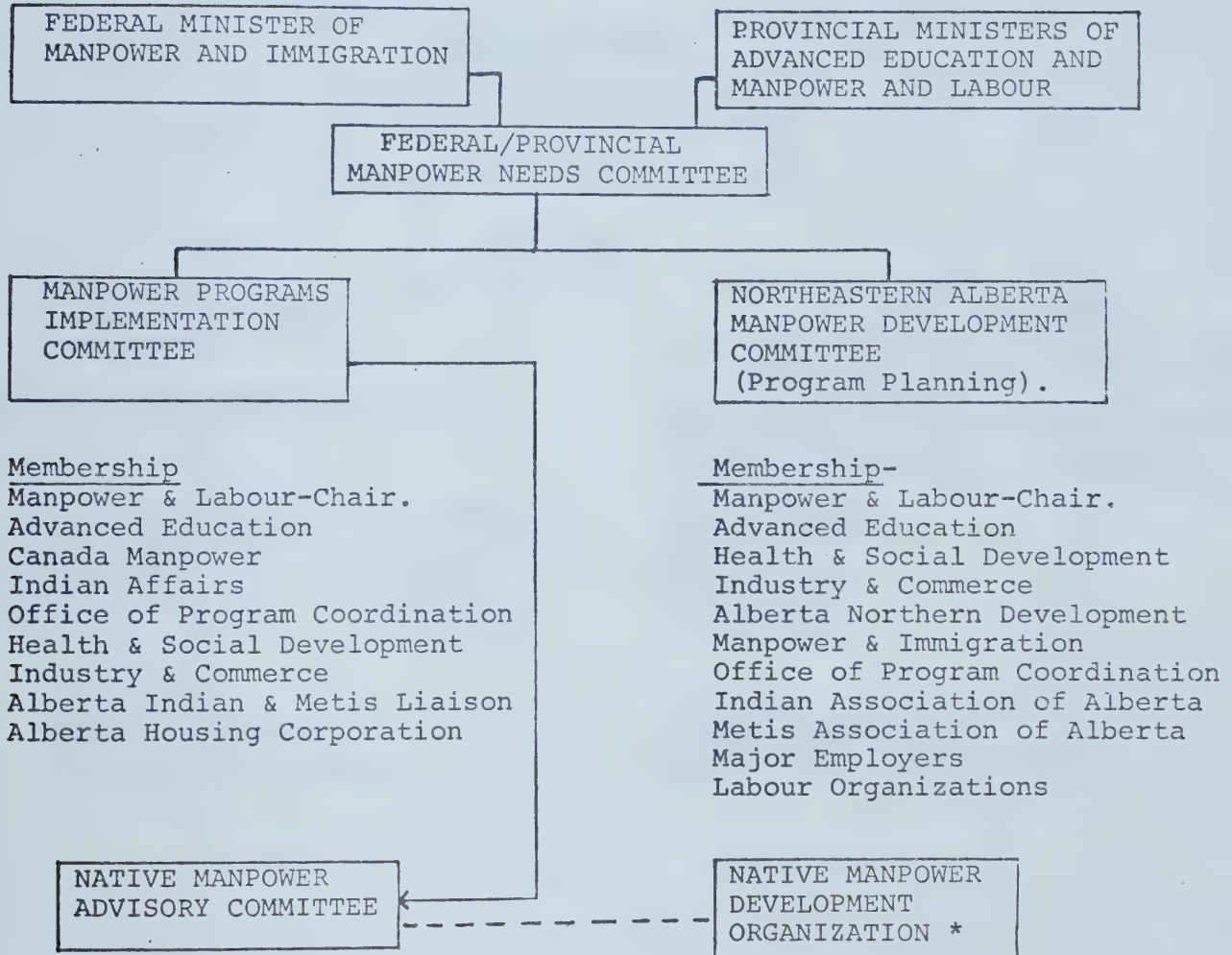
The chart in Figure I also allows for the formation of a native manpower development organization should this become necessary. The organization would probably have its own board of directors and would be formed upon recommendation by the Northeastern Alberta Manpower Development Committee and approval by the Federal-Provincial Manpower Needs Committee. The native manpower development organization could relate to the Manpower Programs Implementation Committee through an advisory committee, as shown in Figure I.

Figure II illustrates a possible organization for the coordination of the manpower planning and implementation activities with all other development activities in northeastern Alberta. The right side of the diagram sets out the overall coordination of planning functions, while the left side shows the overall coordination of program implementation. Since in Alberta the Office of Program Coordination has been assigned responsibility for overall coordination of programs related to oil sands development, that agency has been assigned the chairmanship of the committees concerned with coordination of the total development. Therefore, in the context of overall coordination, the Northeastern Alberta Manpower Development Committee would be a sub-committee of the Northeastern Alberta Planning Committee. A similar relationship would exist on the implementation side of the proposed structure.

In brief, the manpower planning and implementation committees would be responsible to the Federal-Provincial Manpower Needs Committee for purposes of manpower coordination and to the overall committees (chaired by the Office of Program Coordination) for purposes of integrating manpower programming with all other development activities in the region.

FIGURE I

PROPOSED MODEL FOR MANPOWER COORDINATION
IN NORTHEASTERN ALBERTA



Membership
 Manpower Programs
 Implementation Committee

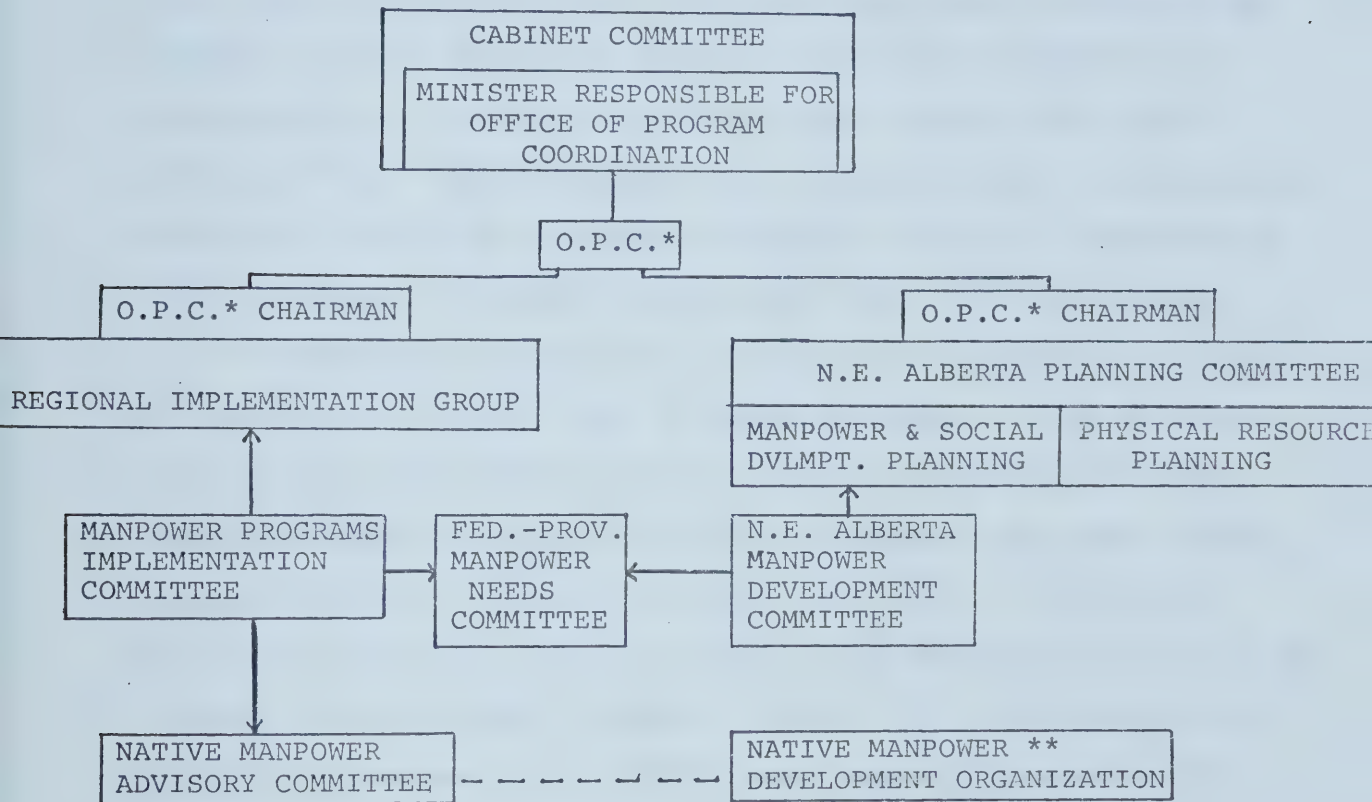
Plus

Synchrude
 Other Major Employers
 Labour Unions

* ASSUMING A NATIVE ORGANIZATION
 IS REQUIRED FOR PROGRAM
 IMPLEMENTATION

FIGURE II

PROPOSED MODEL FOR COORDINATING N.E. ALBERTA DEVELOPMENT



* OFFICE OF PROGRAM COORDINATION

** ASSUMING A NATIVE ORGANIZATION IS
REQUIRED FOR PROGRAM IMPLEMENTATION.

10. OTHER RECOMMENDATIONS

(a) LOCAL PREFERENCE IN HIRING

It is recommended that the collective agreements covering all construction and catering personnel on the Syncrude project include clauses which will ensure that local residents will receive first preference in hiring. Local residents would be defined as persons who have resided in the specified area adjacent to the development for a certain period of time, perhaps five years. Following these local residents, the following order of employment preference should be utilized: residents of Alberta, residents of other provinces in Canada, and persons from outside of Canada.

The major mechanism for maintaining these priorities should be the clearance system used by Canada Manpower. If it is determined through this system that the necessary employees are not available locally then the positions are cleared for other Canada Manpower Centres to attempt to recruit for them. If suitable employees cannot be located in Canada, then the positions should be cleared for recruitment outside of Canada. This procedure can be modified to include special recruitment activities such as those usually carried out by unions.

It is also recommended that government departments and agencies operating in the area adopt similar local hiring priorities.

(b) WEEKLY WORKING HOURS

The projected manpower requirements and the estimations of skill shortages on the construction project have been based upon the assumption that the contractor will be permitted to schedule eight hours of overtime per week for all trades.

While the contractor is anxious to minimize the escalation of construction costs which would result from the extensive use of extended work schedules, it is considered vital that this amount of overtime be allowed in order to induce workers to accept employment at such a remote location, distant from their homes and families. The Committee is in agreement with this proposal.

(c) CONTROL OF IN-MIGRATION

In-migration of transient unskilled workers follows the announcement of every major development, and such an influx can be expected in Fort McMurray. As transient workers usually arrive with little or no funds, they place a heavy load on local welfare agencies and create serious problems in areas of limited living accomodation.

By means of the media and the national network of Canada Manpower Centres, the public must be made aware of the employment and accommodation limitations in Fort McMurray. As it is almost impossible to completely control in-migration, consideration might be given to building a men's hostel which would provide temporary accommodation.

(d) ADDITIONAL EMPLOYMENT DEVELOPMENT

It was revealed in the analysis of the labour force, section 7(a) in this report, that the native manpower surplus in the northern areas of Alberta is expected to increase during the next few years. This increase will occur even if the large number of employment opportunities created by the Syncrude project and associated developments are all filled by local residents. In

fact, it is likely that only about one-third of these new jobs will be occupied by these people.

Therefore, the Manpower Development Committee recommends that immediate action be taken to deal with the problems of increasing native unemployment by means of special economic development programs in the areas of most serious concern, notably the Bonnyville-St. Paul and North Peace River-Fort Vermilion areas.

Provincial initiative for the development of these programs should be undertaken by the Department of Industry and Commerce and by the Department of Federal and Inter-Governmental Affairs through its liaison with the federal Department of Regional Economic Expansion.

(e) TIMING OF THE NEXT OIL SANDS DEVELOPMENT

It is the view of the Committee that it would be undesirable to train local residents for construction jobs on the Syncrude plant and to have them face unemployment as that project approaches completion. If the construction of a third oil sands extraction plant was undertaken in the fall of 1976 (about one year before the Syncrude plant is scheduled to go on-stream), it should be possible for workers to move from the Syncrude plant to jobs on the new project as the manpower demands of the one decline while the requirements of the other increase. Also, this timing would result in little competition between the two projects for any particular skill.

Should the decision be made to permit the commencement of a third plant earlier than the date suggested, it is expected that there would be severe manpower shortages in most of the skilled trades and that substantial recruitment outside of Canada would be required to meet the manpower demands which would be created.

11. NEXT STEPS

Following the approval of the recommendations in this report by the Federal/Provincial Manpower Needs Committee and acceptance in principle or concept by the appropriate Federal and Provincial ministers, the following actions will be necessary if Syncrude proceeds with its oil sand project:

(a) The two Alberta native associations must participate, as members of the Northeastern Alberta Manpower Development Committee, in the detailed planning required to develop and implement relevant manpower programs. Such detailed planning should include the clarification of the implementation roles to be undertaken by the native associations;

(b) The responsibilities of the Office of Program Coordination, as outlined in the Organizational Recommendations, will have to be finalized. This will imply the appointment of senior officials to undertake the leadership roles envisioned in this report;

(c) The Manpower Development Committee must be re-oriented to the detailed planning phase;

(d) Major employers and labour organizations must be invited to participate in the program planning work of the Manpower Development Committee;

(e) A study should be conducted to determine the nature and extent of the various counselling services which are presently operating in northern Alberta. Subsequently, planning

of social development activities and community improvement programs by the relevant Federal and Provincial government departments and agencies, as recommended in this report, should be undertaken;

(f) The proposed Regional Implementation Group should be established;

(g) The Department of Advanced Education should proceed, in consultation with the native associations and the Alberta Indian and Metis Liaison Group, to implement the pre-employment training programs recommended in this report; and

(h) The Manpower Development Committee must prepare cost estimates for the programs which are being planned.



